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Space Administration
George C. Marshall Space Flight Center
Marshall Space Flight Center, Alabama 35812

DISC-PLAN-005
Baseline
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SU10

DISCOVERY PROGRAM

EDUCATION AND PUBLIC

OUTREACH PLAN

April 21, 2005

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SIGNATURE PAGE

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1.0 Purpose

In conjunction with its 1995 strategic planning and the implementation plans developed in 1996, the Office of Space Sciences embarked on a journey to inspire and motivate students and engage the public in its space exploration and discovery activities. The following Education and Public Outreach (E/PO) goals were identified:

- **Share the excitement of space science discoveries with the public;**
- **Enhance the quality of science, mathematics, and technology education, particularly at the pre-college level; and**
- **Help create our 21st-century scientific and technical workforce.**

In 2003 NASA further defined the agency's vision statement

To improve life here, to extend life to there, and to find life beyond.

and its mission statement to

- a) understand and protect our home planet*
 - b) explore the universe and search for life and*
 - c) inspire the next generation of explorers*
- ...as only NASA can.*

This elevated education to being a core mission of NASA. An enhanced, coordinated Agency-level education program was undertaken through the newly created NASA Office of Education.

In 2004 NASA reorganized into four basic mission directorates, and the Science Mission Directorate (SMD) was created from the combination of the Office of Space Sciences and the Office of Earth Sciences. The SMD work is a significant element of the overall NASA education program and is committed to fostering the broad involvement of the space science community in E/PO.

The Solar System Division of SMD is responsible for the Discovery Program which carries out scientific investigations of our own solar system, as well as the search for planetary bodies in other solar systems. This document describes the Discovery Program plan to support the SMD E/PO goals of enhancing the nation's formal education system and contributing to the broad public understanding of science, engineering, mathematics, and technology.

2.0 APPLICABLE DOCUMENTS, DEFINITIONS AND ACRONYMS

2.1 Applicable Documents

MPR 7120.3	Data Management, Programs/Projects
MWI 7120.4	Documentation Preparation Programs/Projects
NPR 1600.0	NASA Security Program Procedural Requirements
NPD 1440.6	NASA Records Management

2.2 Definitions

Document: Any statement or form in conventional/electronic media which presents policies, procedures, work instructions, instructional material, drawings, plans, specifications, requirements, handbooks, manuals, reports, standards, or other correspondence.

Mission: A complete, self-standing NASA space science investigation characterized by definition, development, launch service, mission operations, and data analysis.

2.3 Acronyms

DPO	Discovery Program Office
E/PO	Education and Public Outreach
MPR	Marshall Procedural Requirements
MSFC	Marshall Space Flight Center
NASA	National Aeronautics and Space Administration
NPD	NASA Policy Directive
NPR	NASA Policy Requirements
PI	Principal Investigator
SMD	Science Mission Directorate

3.0 NASA Solar System Exploration

The discoveries produced by NASA solar system exploration missions will not only dramatically advance our understanding of the solar system, they will also allow NASA to further refine its exploration strategy. As noted earlier, the Discovery Program is a major program within the Solar System Division of SMD executing missions of solar system exploration. SMD has assigned management of the Discovery Program to NASA's Marshall Space Flight Center (MSFC). A brief overview is given below.

3.1 The Discovery Program

Ten years ago, the Discovery Program was initiated as a means of implementing small, highly focused, competitively selected missions whose costs are capped from the start. It is a series of stand-alone scientific missions without an overarching science theme. Each mission is led by a principal investigator (PI) who is usually affiliated with a university. Each mission has a project manager supporting the PI and provides an implementing organization which to date have included NASA's Ames Research Center, NASA's Jet Propulsion Laboratory, and the Johns Hopkins University Applied Physics Laboratory. The mission team members come from academia, industry, and research institutions.

Throughout the 1990's, the value of this mission class was amply demonstrated, and now Discovery missions are a key element of NASA's exploration program. They offer flexibility, rapid response, and broad involvement in a way that might not be acceptable for larger, more costly missions. Discovery missions will continue to be a central element of the Solar System

Division for the foreseeable future and will continue to be launched at their current rate of about every eighteen months or less.

A list of the Discovery missions can be found in the Discovery Program Plan, DISC-PLAN-001.

4.0 Discovery Program Office E/PO

The NASA Discovery Program Office located at Marshall Space Flight Center (MSFC) has been assigned the responsibility to carry out the Discovery Program E/PO activities. A program office manager for E/PO, reporting to the Discovery Program manager, is responsible for overseeing and working with the E/PO leads for each Discovery mission to integrate their efforts.

Just as the science goals of each Discovery mission are unique, so is their approach to education and public outreach. The Discovery Program requires that each mission include a plan to allocate 1 – 2% of its total implementation budget (excluding the launch vehicle cost) on education and public outreach. Teams composed of educators, scientists, and communications specialists design the mission E/PO plan, looking for new and innovative ways to engage students and the public with the excitement and the meaning of their mission.

The program office E/PO manager works in cooperation with the mission E/PO leads to establish linkages among the program, the missions, the SMD E/PO support network of education forums and regional broker/facilitators, and other partners to help tell the cohesive story that provides context to NASA's solar system exploration.

The outcomes of this effort are education and outreach products, activities, and presentations to actively promote greater awareness and practical use of program and mission significant events, activities and results, as well as assistance to and coordination with the Discovery missions.

5.0 E/PO Goals

The specific E/PO goals of the Discovery Program are to:

- 1. Raise public awareness of the Program and its missions through products and activities designed for national, regional, and local audiences.**
- 2. Foster collaborative relationships among the program, the missions, and the SMD forums and to boost the impact of E/PO programs by improving their relevancy to external customers through coherence and by facilitating efficient use of resources.**
- 3. Provide programmatic leadership to the mission E/PO leads.**

To achieve these goals the MSFC E/PO tasks of the Program Office will include:

- a) develop and maintain a public web site that highlights the Discovery Program and its missions. The web site will provide an overview of the missions and news updates,

- identify means for involvement in the program, offer downloadable program level products, and promote the educational opportunities offered by each mission.
- b) research, write and publish an on-line quarterly newsletter to provide program news and current status of each mission plus their E/PO highlights. Significant mission events will be featured, including interviews and background stories on principal investigators, project managers, and other key project personnel.
 - c) produce and distribute program and mission educational and outreach products (posters, CD-ROMs, decals, postcards, etc.) which communicate exploration activities to the public, students, educators, museums and science centers, Congress, team members, and the science and technology communities.
 - d) encourage the missions to participate in and be responsive to forum-wide efforts such as monthly telecons and annual community conferences associated with formal and informal education activities to promote science and exploration.
 - e) coordinate Discovery Program participation (booth, displays, materials, staffing, and workshops) in conferences associated with education and space exploration.
 - f) work one-on-one with the mission E/PO leads to establish close working relationships and facilitate regular, pro-active exchange of information.
 - g) serve as an ad-hoc participant on mission E/PO teams in preparation for launch, encounters, and sample return.

Discovery missions are selected by NASA Headquarters. During the formulation study phase, an E/PO plan is approved and put in place to implement. Hence, the Discovery Program Office does not dictate to the missions what or how they will do E/PO. Their E/PO plan is delineated in their proposal and their selection gives them the approval to proceed as planned. The Discovery Program E/PO manager works with the mission E/PO leads to provide guidance and ensure compliance with NASA E/PO policies and procedures.

The Discovery Program E/PO manager serves as the point of contact for the missions regarding issues pertinent to E/PO, such as NASA requirements, necessary approvals, media constraints, and points of contact. In addition, the program office interacts with the missions to share best practices, help avoid duplication, and support creative ideas for participation in larger programs.

The E/PO manager is delegated authority from the program manager to work with the missions and give programmatic approval for artwork, media communications, and E/PO products. The E/PO manager also represents the program at a variety of meetings for public communications.

The E/PO manager serves as a resource and point of contact for E/PO related inquiries, particularly those involving multiple missions. Inquiries may come from NASA Headquarters or other areas of NASA, institutions, schools, or the public.

6.0 Records

This plan will be maintained in accordance with MPR 1440.2 and NPR 1441.1 as shown in Table I below.

TABLE I

Records	Record Custodian	Location	Disposition Authority	Disposition Instructions	Maintenance
DISC-PLAN-005	SU10/JPL Shari Asplund	Building 4610, Room 5038	NPR 1441.1	Retire to Federal Records Center 2 years after completion, renewal, termination or cancellation of the program. Destroy when 10 years old.	Filed by title, and PCB date, hardcopy/chronologically in folder